



## FUSION JOINING DEVICE FOR PLASTIC TUBES

### FIELD OF THE INVENTION

5 The present invention relates to a fusion joining device  
for plastic tubes that heats the joint portion of plastic tubes  
for fusion joining the joint portion. Here, the term "plastic  
tubes" also refers to tubes which comprise a tube made of  
plastic, such as a plastic joint body and a plastic heat  
resistant cylinder.

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### BACKGROUND

With conventional fusion joining devices for plastic tubes,  
a heat fusion joinable plastic tube is loaded on the peripheral  
surface in the vicinity of the joint portion of plastic tubes,  
15 and the peripheral surface of this heat fusion joinable plastic  
tube is further tightly covered with a heat resistant cylinder,  
the heater being tightly contacted with the peripheral surface  
of this heat resistant cylinder such that the heat fusion  
joinable plastic tube is fusion joined to the peripheral  
20 surface in the vicinity of the joint portion by the conduction  
heat of the heater that is transferred through the heat  
resistant cylinder, in order to fusion join the plastic tubes  
to each other. The heater body is made of a heat conductive  
and insulating material, being formed in the shape of a  
25 semi-cylinder, and a heating element, such as a Nichrome wire,  
is disposed inside of the heater body. (Refer to Japanese  
Laid-Open Publication No. 8-174675, for example.)

However, with such a conventional fusion joining device for  
plastic tubes, which is based on the art as mentioned in  
30 Japanese Laid-Open Publication No. 8-174675, the disposal of  
a heating element, such as a Nichrome wire, in the heater body  
has increased the thickness of the heater, resulting in the  
entire device being a large-sized one, and the complicated  
configuration of the heater has been an obstacle to the  
35 reduction in cost.

Developed in consideration of such problems of the prior

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sub. spec.  
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